

Snout-vent length 44.6 (all measurements given in millimetres); length of tail (unregenerated) 33.0; length of snout 4.7; head width 8.5; distance between eye and ear 3.5; diameter of orbit 3.8; axilla to groin 21.7; length of fore limb 15.8; length of fourth finger 2.7; length of hind limb 22.9; length of fourth toe 4.1.

Variation: In the collection of the Department of Zoology of the University of Western Australia are three juvenile specimens and an adult male from seven miles north and twelve miles south of Booloogooroo, respectively. These specimens agree with the holotype in all respects except the following: Rostral shield two and one-half to almost three times broader than deep; supranasals separated by a single scale in one juvenile; supralabials nine to eleven, avg. 10; eleven to thirteen, avg. 12, scales between nostril and anterior margin of orbit; twenty-five to twenty-nine, avg. 27.2, scales between centrolateral margins of orbit; mental slightly longer than broad to broader than long; infralabials eight to ten, avg. 9.3; mid-dorsal body scales more oval than conical in juveniles; ten to thirteen, avg. 11.6, granules covering inferior surface of fourth finger; fourteen to seventeen, avg. 15.7, granules covering inferior surface of fourth toe; preanal pores absent; cloacal scales undeveloped in juveniles; reticulation brown to brick-red; vertebral region of body and tail white, devoid of reticulation.

Relationships: *Diplodactylus squarrosus* appears to be most closely related to *D. stenodactylus*. This relationship is based on the similar shape and scalation of the digits and the peculiar position of the nostril between the supranasals, first supralabial and two to three postnasals.

Remarks: The three juvenile specimens from 7 miles north of Booloogooroo were excavated from lizard burrows, probably those of *Amphibolurus reticulatus*. The adult male from 12 miles south of Booloogooroo was collected at night on a small relatively hard claypan.

NOTES ON THE SLOUGHING IN CAPTIVITY OF SKINKS OF THE GENUS *TILIQUA*

By JOHN E. EDWARDS, Surbiton, Surrey, England.

Specimens of *Tiliqua* spp. in one of the writer's vivariums have been observed to exhibit a distinct behavioural pattern associated with the process of sloughing. These observations form the basis of the present note.

Hickman (1960) described the sloughing of the skink *Egernia whitii*, but similar information on *Tiliqua* has not been traced in the literature.

EXPERIMENTAL CONDITIONS

Specimens of *Tiliqua scincoides*, *T. gigas* and *Tiliqua* [*Trachysaurus*] *rugosa* were housed communally in a vivarium of the fol-

lowing dimensions: length 3 ft. 6 in.; width 2 ft.; height 2 ft. 6 in. Heating was provided by a single gas jet four inches below the metal floor of the vivarium, from which it was separated by a short, angular baffle plate. In the absence of any means of thermostatic control, the temperature within the vivarium ranged between approximately 70° F. and 85° F.

Sheets of paper and cork were placed upon the floor to provide shelter. Lighting, by means of a 15 W. bulb suspended within the vivarium, was supplemented by a ear headlamp reflector.

The diet of the lizards consisted of raw meat, liver, fish, soft fruit and marrow. A supply of fresh water was always provided.

OBSERVATIONS

Sloughing was preceded by a fast of a duration of up to ten days, and towards the end of this period the consumption of water increased markedly. The lizards frequently sought shelter, and exhibited an irritable disposition when handled. This period was followed by one of restlessness.

During the final two or three hours before sloughing the lizards were observed to stand with their heads in as near to a vertical position as their structure permitted, taking deep inspirations so that their bodies alternatively expanded and flattened dorso-ventrally.

All species were observed to break the skin by rubbing the head against a sharply pointed rock. The skin of *T. gigas* and *T. scincoides* was abraded in small sections and eaten while still soft, but the *T. rugosa* slough was found to be cast as an entire sheath. The latter was observed to free itself from the reversed sheath by drawing its tail across the rock.

There appears to be a relationship between the frequency of sloughing and the environmental temperature. Subject to the maintenance of good health, and a temperature within the limits specified, sloughing occurred four or five times each year, but the frequency was reduced if the temperature was lowered to below 70° F. for an appreciable period. A specimen of *T. rugosa* suffering from a jaw infection did not moult for a period of seven months.

REMARKS

It is appreciated that the behaviour of skinks in captivity is likely to be different from that in the natural environment where, for example, they would not have access to water for much of the year.

The suggestion that environmental temperature influences the frequency of moulting has been reported by Hickman (*loc. cit.*), who also found that *E. whitii* is similar to *Tiliqua* in moulting four to five times each year. Other factors, such as growth rate, must also determine the frequency.

REFERENCE

- HICKMAN, J. L. 1960. Observations on the skink lizard *Egernia whitii* (Laëpède). *Papers Proc. Roy. Soc. Tasmania*, 94: 111-118.